Kindergarten Mathematics Scope & Sequence

Unit	Standard(s)/Outcome(s)/Topic(s)	Essential/Guiding Questions
Unit 1 : Counting and Cardinality (to 10) and Operations and Algebraic Thinking (Sep/Oct/Nov)	**K.CC.1:** Count to 100 by ones and by tens **K.CC.2:** Count forward beginning from a given number within the known sequence (instead of having to begin at 1) *to 100 **K.CC.3:** Write numbers from 0-10. Represent a number of objects with a written numeral 0-10 (with 0 representing a count of no objects)* *modified from original standard **K.CC.4:** Understand the relationship between numbers and quantities; connect counting to cardinality (0-10) **K.CC.4a:** When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. (0-10) **K.CC.4b:** Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they are counted. (0-10) **K.CC.4c:** Understand that each successive number name refers to a quantity that is one larger. (0-10) **K.CC.5:** Count to answer "how many?" questions about as many as 10 things arranged in a line, a rectangular array, or a	• How can objects be counted? • How can numbers be compared? • How does understanding four help us understand five? • How does understanding five help us understand six, seven, eight, nine and ten? • How can we show the number _____in several ways? • How can numbers be combined and separated?

circle, or a scattered configuration; given a number from 1-10, count out that many objects.*

*modified from original standard

K.CC.6: Identify whether the number of objects in a one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies

*include groups with up to 10 objects

K.CC.7: Compare two numbers between 1 and 10 presented as written numerals

K.OA.1: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations.

*drawings need not show details, but should show the mathematics in the problem. This applies wherever drawings are mentioned in the standards

K.OA.2: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

K.OA.3: Decompose number less than or equal to 10 into pairs in more than one way, e.g. by using objects or drawings, and record each decomposition by a drawing or equation (e.g. 5 = 2 + 3 and 5 = 4 + 1)

K.OA.4: For any number from 1 to 9, find the

number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.OA.5: Begins to fluently add and subtract within 5. *Students will be expected to master counting on 1, counting back 1, adding zero and subtracting zero through 20 by the end of Kindergarten.

Unit	Standard(s)/Outcome(s)/Topic(s)	Essential/Guiding Questions
Unit 2 : Measurement and Data (Dec/Jan)	**K.MD.1:** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. **K.MD.2:** Directly compare two objects with a measurable attribute in common to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one as taller/shorter **K.MD.3:** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. *limit category counts to be less than or equal to 10 **K.OA.5:** Begins to fluently add and subtract within 5. *Students will be expected to master counting on 1, counting back 1, adding zero and subtracting zero through 20 by the end of Kindergarten.	• What words can be used to describe and compare objects? • How can we measure and compare objects? • In what ways can objects be sorted? • In what ways can objects be classified into given categories? • How can numbers be combined and separated?

Unit	Standard(s)/Outcome(s)/Topic(s)	Essential/Guiding Questions
Unit 3 : Counting and Cardinality to 20 and Number and Operations in Base Ten (Feb/Mar/Apr)	**K.CC.1:** *Review* Count to 100 by ones and by tens **K.CC.2:** *Review* Count forward beginning from a given number within the known sequence (instead of having to begin at 1) **K.CC.3:** Write numbers from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects) **K.CC.4:** Understand the relationship between numbers and quantities; connect counting to cardinality (0-20) **K.CC.4a:** When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. (0-20) **K.CC.4b:** Understand that the last number name said tells the number of objects counter. The number of objects is the same regardless of their arrangement or the order in which they are counted. (0-20) **K.CC.4c:** Understand that each successive number name refers to a quantity that is one larger. (0-20) **K.CC.5:** Count to answer "how many?" questions about a s many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered	• How can objects be counted? • How can numbers be sequenced? • How does understanding five and ten help us understand fifteen and twenty? • How can we show the number _____ several ways? • How can numbers be combined and separated?

	configuration; given a number from 1-20, count out that many objects. **K.CC.6:** *Review* Identify whether the number of objects in a one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies *include groups with up to 10 objects **K.CC.7:** *Review* Compare two numbers between 1 and 10 presented as written numerals **K.NBT.1:** Compose and decompose numbers for 11-19 into ten ones and further ones, e.g., by using objects or drawings, and record each compositions or decomposition by a drawing or equation (such as 18=10+8); understand that these numbers are composed of tens ones and one, two, three, four, five six, seven, eight, or nine ones. **K.OA.1:** *Review* Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations. *drawings need not show details, but should show the mathematics in the problem. This applies wherever drawings are mentioned in the standards **K.OA.2:** *Review* Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	

	K.OA.4: For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g. by using objects or drawings, and record the answer with a drawing or equation. K.OA.5: Begins to fluently add and subtract within 5. *Students will be expected to master counting on 1, counting back 1, adding zero and subtracting zero through 20 by the end of Kindergarten.	
Unit	**Standard(s)/Outcome(s)/Topic(s)**	**Essential/Guiding Questions**
Unit 4 : Geometry (April/May/June)	K.G.1: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. K.G.2: Correctly name shapes regardless of their orientation and overall size. K.G.3: Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). K.G.4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations using informal language to describe their similarities, differences, parts, (e.g. number of sides and vertices/"corners") and other attributes (e.g. having sides of equal length). K.G.5: Model shapes in the world by building shapes from components (e.g. sticks and clay	- How can we describe where an object is in relation to another object? - How can objects be described and compared? - How can objects be described and compared? - What real world objects can be used as examples of three dimensional shapes? - How can numbers be combined and separated?

	balls) and drawing shapes. **K.G.6:** Compose simple shapes to form larger shapes. For example "Can you join these two triangles with full sides touching to make a rectangle?" **K.OA.5:** Begins to fluently add and subtract within 5. *Students will be expected to master counting on 1, counting back 1, adding zero and subtracting zero through 20 by the end of Kindergarten.	